Claim Objections

The Examiner has objected to the specification as containing specifically noted informalities. Applicant thanks the Examiner for his close reading of the claims and has amended the wording of the specification to overcome the specified informalities.

Claim Rejections – 35 USC 112

Claims 4 and 6 have been rejected by the Examiner citing 35 U.S.C. 112, second paragraph. Applicants, while preserving the right to object to the rejection of these claims, have canceled claims 4 and 6, thus rendering the need for a response to the rejection of these claims moot.

Claim Rejections – 35 USC 102

Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by an article published by Schulze and d'Hoedt appearing in Dentomaxillofacial Radiology (2002) 31, 32-38.

Claim 1 has been amended to clarify its claimed structure as having its radio-opaque fiduciary element permanently attached to the sensor housing in a permanently fixed spatial position to the sensor imaging surface. As amended, it is believed that claim 1 is patently distinctive over Schulze and d'Hoedt either singly or in any reasonable combination with other known references for at least the reasons analyzed below. Claim 6 has been canceled so analysis of its rejection has been rendered moot.

Schulze and d'Hoedt's structure requires that its two reference spheres be "*temporarily attached to an object* with their main axis aligned with the object." Article

page 33, left column, lines 6 *et seq.*, also reiterated at Article page 37, right column, lines 12 *et seq.* , and at ***idem*** lines 29 *et seq.* (Emphasis added.) Each of these citations shows that Schulze and d'Hoedt's teaches a structure that requires its reference spheres be attached temporarily to the object being imaged and not in a fixed relation to the sensor's imaging plane, but to the object of interest itself. Additional support for this conclusion of having the reference spheres necessarily attached to the object of interest being imaged is found in the article on page 32, right column, first full paragraph starting at line 22, which states that Schulze and d'Hoedt's investigation is based upon the magnification of an object being "directly proportional to the distance of the object from the projection plane. Hence, by means of a reference object of known dimensions, the position of the object within an otherwise fixed projection system can be derived from its magnification."

Consequently, there is no provision, teaching, or suggestion in Schulze and d'Hoedt that its reference spheres be permanently attached to the imaging surface in a known, permanently fixed spatial relation as in claim 1, as holding the reference spheres in a permanently fixed spatial relation to the imaging surface would eliminate any possibility of determining the distance of the object being imaged from the projection plane using magnification effects on the reference spheres, i.e., since the spatial relationship of the reference spheres to the imaging plane does not vary, there would be no magnification in the "size" of the reference spheres as the distance of the object being imaged varied from the projection plane. Applicants' structure in claim 1 is in direct contradiction to Schulze and d'Hoedt's structure and teachings. Applicants' structure holds the fiduciary elements in a permanently fixed spatial relation to the sensor's

imaging plane. It does not attach the reference spheres to the object being imaged. As such, Applicants' structure does not allow for magnification effects to occur on the reference spheres images.

Therefore, Schulze and d'Hoedt's positioning of their reference spheres cannot be altered to the structure being claimed by Applicants, i.e., positioning them as permanently attached to the sensor housing in a permanently fixed spatial relation to the sensor imaging plane, without rendering their method inoperable.

This is because Schulze and d'Hoedt use their reference spheres attached to the object of interest to determine the distance and orientation of a plane formed by the object of interest with the imaging plane which is held perpendicular to the X-ray source. On the other hand, Applicants' structure is used to determine the orientation of the sensor's imaging plane with respect to the radiation source and not other objects that may be imaged on the imaging plane. The difference between the two structures is in what they are used to image, i.e., the orientation of the subject object with regard to the X-ray source (the imaging plane held perpendicular) (Schulze and d'Hoedt), or the reference fiduciaries with regard to the imaging plane which is allowed variable, unknown orientation with regard to the X-ray source (Applicants). (Applicants, for brevity, hereby incorporate and refer to their previous analysis of Schulze and d'Hoedt found in the response to the previous May 23, 2006 Office Action for additional analysis of the mutual exclusiveness of Applicants' structure compared to the Schulze and d'Hoedt structure.)

As these two structures differ fundamentally, and Applicants have added clarifying language to claim 1 to show that Applicants' fiduciaries are permanently

attached to the sensor housing in a permanently fixed, known spatial orientation to the sensor imaging plane, Applicants believe that the patentable distinction between claim 1 and the Schulze and d'Hoedt reference is now clear and respectfully requests that the rejection of claim 1 be withdrawn and the claim passed to allowance.

Claim Rejections – 35 USC 103(a)

Claims 2, 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over an article published by Schulze and d'Hoedt appearing in Dentomaxillofacial Radiology (2002) 31, 32-38 as applied to claim 1 and further in view of U.S. Patent No. 1,286,251 to Dorr ("Dorr").

Dorr provides a "Mouth Film-Holder" that acts as an interchangeable holder for positioning and retaining skiagraph film in the mouth of a subject for the purpose of receiving an impression of teeth, tooth roots, or external jaw structure above or below a line of closure. It is not a sensor itself.

Claim 1, upon which the other cited claims depend, has been amended to clarify and distinguish more clearly over the Schulze and d'Hoedt reference as analyzed above and is now believed to be in condition for allowance.

Dorr fails to provide any teaching, suggestion, or disclosure that would add missing structure to Schulze and d'Hoedt necessary to render the cited claims obvious under the requirements of 35 U.S.C. 103(a). Specifically, Dorr does not discuss or modify the use of reference spheres as taught by Schulze and d'Hoedt to provide Applicants' claimed structures of having the reference spheres permanently attached to the sensor housing in a known, permanently fixed spatial position.

Claims 2, 3, and 5 depend upon claim 1 and further delineate the inventive structure by adding additional structural limitations. As such, Applicants believe that they also are patentable over both the Schulze and d'Hoedt and Dorr references, either singly or any reasonable combination, if such combination were possible, of the Schulze and d'Hoedt and Dorr references. Applicant therefore respectfully requests the withdrawal of the rejection of these claims and their passage to allowance.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schulze and d'Hoedt appearing in Dentomaxillofacial Radiology (2002) 31, 32-38 as applied to claim 1 above, and further in view of U.S. Patent No. 6,196,715 B1 to Nambu et al. ("Nambu").

Nambu discloses an X-ray tomosynthesis system as an X-ray diagnostic system. Specific reliance is made on the argument that Nambu discloses "a method that provides at least one radio-opaque fiduciary element (M) on the housing of a radiation detector (14) (column 30, lines 13-21)."

Applicants respectfully disagree with this assertion for at least the reasons noted below.

Nambu, states in full as follows:

"7.7 Correction of Distortion Detector Side

Another example in this category is associated with correcting distortion occurred *in the inside of the detector. Herein, 'the inside of the detector' is composed of the entire path routing from the X-ray incident plane, such as I.I., to the D/A converter placed within the detector. If distortion occurs in the path, there appear an unfavorable phenomenon such that, even though X-rays indicative of a linear line come in, signals*

indicative of a curved line are output. A resultant tomogram include distortions.

One counter measure is that markers different in X-ray transmittance ratios are put on the X-ray incidence surface of the detector, correction data are acquired with the markers, and the distortion of the detector inside is corrected based on the acquired correction data. This correction can be performed by the control/processing apparatus 18, FIGS. 35 and 36 exemplifies the markers put on the surface.

7.7.1 Concurrent Correction with Scanning

As one example of the distortion correction, as shown in FIG. 35, for example, a plurality of spot-like markers M can two-dimensionally be mapped on the incidence surface of the X-ray detector 14. *In the spot-like markers, though their shade data are taken as part of the actual projection data, they have almost no influence on actually recombined images.*" (column 29, lines 60 et seq.)" (Emphasis added.)

Also, earlier, in the description of FIGS. 35 and 36, Nambu states:

"FIG. 35 shows an example of markers put on the front surface of the detector *for correcting distortions caused due to detector's inside circuits*;

FIG. 36 further shows another example of markers put on the front surface of the detector *for correcting distortions caused due to detector's inside circuits*" (Emphasis added)

Thus the markers are proposed to correct distortions that occur not from the projective effects of the X-ray beams as Applicants' claimed fiduciary elements, but instead from those distortions that occur "in the inside of the detector", i.e. *in the path from the X-ray incident plane to the D/A converter*. That is why the FIGS show a regular marker system (grid pattern) covering a majority of the detector surface to allow for

detection and elimination of non-linear detector signals generated by circuitry in the inside of the detector. There is no provision here for manipulation and correction of X-ray generated data impinging onto the imaging detector surface, i.e. the other side of the detector path, but only to correct errors created by non-linear signals generated in the inside of the detector. There is an assumption in Nambu that the incident X-ray beam will be composed of collimated rays striking the detector surface.

Nambu itself makes its specific and limited use of the cited spot-like markers of FIGS 35 and 36 clear in proposing in the specification beginning at paragraph 6.2 the use of positional markers,

"6.2. Utilization of Markers

As another feature about the position detection, there is provided a technique that uses markers different in X-ray transmittance ratios than a patient body, which enables the markers to be duplicated into each frame of projection data. Calculating the positions of the markers in each of a plurality of frames of projection data provides position information in each frame of projection data, which is necessary in data selection for image recombining.

FIG. 26 illustrates a practical example, where markers M1 (x1, y1, z1), M2 (x2, y2, z2) and M3 (x3, y3, z3) are provided between the focus S (x, y, z) and the detector 14. Solving nine simultaneous equations for the coordinates of the markers M1, M2 and M3 using projection data provides the position of the focus S, thus providing a relative movement amount of the focus. Specifically, in the case of FIG. 26, since the markers are three in number, six variables as for the detector 14 can be solved, providing the positions of the detector 14 and focus S. Additionally, one marker is enough, provided the position

of the detector 14 is known (i.e., three variables).

6.2.1. Attaching Markers to Patient

Markers may be attached, by way of example, to a patient body.

6.2.2. Attaching Markers to Couch

Also markers may be attached to the couch (tabletop).

6.3. Correction of Constant Position Shifts Utilizing Markers

As another feature as concerning the data selection, there can be provided a process by which constant position shifts are corrected utilizing markers. For example, as illustrated in FIG. 27, a plate member 62 is placed in front of the tube 12 movable within a covering member 70. Pin-holes M1 to M3 serving as markers are formed through the plate member 62. In advance of scanning, position correction data are acquired using the pin-holes M1 to M3. Projection data acquired in the scanning are corrected based on the position correction data. By this method, constant position shifts, such as mechanical backlashes, can be corrected.

The markers M1 to M3 may also be attached to the couch."

However, as is seen in the sections quoted above, these positional markers are only used for spatial positioning and combining images. No suggestion of projective distortion correction using these markers, or of mounting the markers to the detector housing is made in Nambu.

In direct contradiction and distinction to Nambu's disclosure and teaching concerning its "markers", Applicants' claimed structure is for at least one radio-opaque fiduciary element of known shape, size and location that is permanently attached to the detector housing in a known, permanently fixed spatial position to the digital imaging

surface. Each element has a known projected image shape produced by a known angle of incidence between the radiation source and the imaging surface intermediate the radiation source and the surface of the radiation detector. Each fiduciary element casts a projected image on the radiation detector when it is illuminated by a radiation source. The projected image is used for determining an unknown angle of incidence between the radiation source and the imaging surface by comparing the projected image shape of the fiduciary element against the projected image shape of the fiduciary element generated by a known angle of incidence. This is done, unlike Nambu, to correct for projective distortion in the projected image shape caused by the unknown angle of incidence and not to correct for distortions caused in the inside of the detector system. Merely placing Applicants' claimed fiduciary elements on the surface of the detector will not provide for a projected fiduciary image as claimed by Applicants. Besides there is no suggestion, teaching, or disclosure in Nambu that would suggest its "markers" be used as claimed by Applicants for correcting projective distortions occurring outside of the detector's internal circuitry.

Additionally, as analyzed above, any attempted combination of Nambu with the teaching of Schulze and d'Hoedt holding the fiduciary elements in a fixed relation to the sensor imaging plane (as required in Nambu) cannot be done in the Schulze and d'Hoedt disclosure without rendering it inoperative. Therefore, any attempt to combine the Nambu reference with Schulze and d'Hoedt results in an inoperative structure and would require the use of Nambu's "markers" for a purpose diametrically opposed to the teachings of Nambu, i.e. correction of projective distortions before the image plane as opposed to signal distortion occurring after the image plane.

Accordingly, since Applicants' claimed structure cannot be found disclosed, taught, or suggested by the "markers" of Nambu, Applicants believe that its claim language is patentably distinguishable over the cited references either taken singly or in any reasonable combination and respectfully requests that the rejection of this claim be withdraw and the claim passed to allowance.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over an article published by Schulze and d'Hoedt appearing in Dentomaxillofacial Radiology (2002) 31, 32-38 as applied to claim 1 and further in view of U.S. Patent No. 6,811,312 B2 to Bratslavsky et al. ("Bratslavsky").

Bratslavsky is argued to disclose a holding tab removably attached to a radiation sensor for positioning the sensor relative to teeth.

Claim 8 depends from claim 1 further adding defining and limiting structure. As analyzed above, Claim 1 is believed patently distinct from the Schulze and d'Hoedt references in at least claiming a radio-opaque fiduciary element of known shape, size and location, permanently attached to the sensor housing in a known, permanently fixed spatial position to the digital imaging surface. Applicants' claimed fiduciary elements are positioned intermediate the digital imaging surface and the radiation source for use in creating a digitized data output representative of the projected images on the digital imaging surface. Bratslavsky fails to provide for this claimed structure. Without supplying such claimed structure, and neither teaching nor suggesting it, Bratslavsky even in combination with Schulze and d'Hoedt fails to provide a valid basis for rejection of the subject claims. Accordingly, withdrawal of the rejection of claim 8 is respectfully requested and that claim 8 be passed to allowance.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being anticipated by an article published by Schulze and d'Hoedt appearing in Dentomaxillofacial Radiology (2002) 31, 32-38 in view of U.S. Patent No. 1,286,251 to Dorr ("Dorr").

Claim 9 has been amended to clarify its claimed structure as having its radio-opaque fiduciary element permanently attached to the sensor housing in a permanently fixed spatial position to the sensor imaging surface. As amended, it is believed that claim 9 is patently distinctive over Schulze and d'Hoedt either singly or in any reasonable combination with other known references for at least the reasons analyzed below. Claim 10 depends from claim 9 and further delimits the structure being claimed.

One distinguishing structural element of claim 9, not found in the Schulze and d'Hoedt reference, is discussed above in the analysis of claim 1, being the claimed structure of having the radio-opaque fiduciary element permanently attached to the sensor housing in a known, permanently fixed spatial position to the digital imaging surface. This claimed structural distinction has been analyzed above for claim 1, and, since this structural limitation also appears in claim 9, that analysis showing claim 1 as being patently distinctive over the Schulze and d'Hoedt reference, is incorporated and repeated here in analysis of claim 9.

Consequently, Applicants believe that claim 9, and its dependent claim 10, are, like claim 1 and its dependent claims, patently distinctive over the Schulze and d'Hoedt reference and therefore allowable.

The creation of a combination structure incorporating the Dorr reference into the Schulze and d'Hoedt structure does not render this conclusion invalid.

Specifically, Dorr provides a "Mouth Film-Holder" that acts as an

interchangeable holder for positioning and retaining skiagraph film in the mouth of a subject for the purpose of receiving an impression of teeth, tooth roots, or external jaw structure above or below a line of closure. It is not a sensor itself. Dorr does indicate that its film pack may comprise two planar portions abutting at a non-zero angle to form a continuous imaging surface. However, it completely fails to provide the missing structural elements being claimed by Applicants in claim 9 shown to be missing from the Schulze and d'Hoedt reference, i.e., the radio-opaque fiduciary element permanently attached to the sensor housing in a known, permanently fixed spatial position to the digital imaging surface. Any combination of Dorr with the Schulze and d'Hoedt reference continues to fail to provide a sufficient basis for rejection of Applicants claims under 35 U.S.C. 103(a). Additionally, there is no teaching, suggestion, or disclosure in Dorr or in Schulze and d'Hoedt equivocating analog film with a digital sensor for imaging purposes. Hence, any such attempted combination would be based upon hindsight, as Dorr did not know of digital sensors and their imaging capabilities and Schulze and d'Hoedt knowing of analog film and its uses, did not teach, disclose, suggest, or equivocate its use with digital sensors in its disclosure.

However, with claims 9 and 10, as amended, the Schulze and d'Hoedt, and Dorr reference structures in any reasonable combination (assuming such combination to be possible) continue to fail to provide, either explicitly or implicitly, for Applicants' claimed structure appearing in the subject claims of a radio-opaque fiduciary element permanently attached to the sensor housing in a permanently fixed spatial position to the sensor imaging surface. Without supplying such claimed structure, and neither teaching nor suggesting it, the Schulze and d'Hoedt, and Dorr references cannot provide a valid

basis for rejection of the subject claims. Accordingly, withdrawal of the rejection of these claims is respectfully requested and that the claims be passed to allowance.

Claim 12 is rejected under 35 U.S.C. 103(a) over Schulze and d'Hoedt in view of Dorr as applied above to claim 9, and further in view of U.S. Patent No. 6,811,312 B2 to Bratslavsky et al. ("Bratslavsky").

Bratslavsky is argued to disclose a holding tab removably attached to a radiation sensor for positioning the sensor relative to teeth.

Claim 12 depends from claim 9 further adding defining and limiting structure. As analyzed above, Claim 9 is believed patently distinct from the Schulze and d'Hoedt, and Dorr references in at least claiming a radio-opaque fiduciary element permanently attached to the sensor housing in a permanently fixed spatial position to the sensor imaging surface. Bratslavsky fails to provide for this claimed structure. Without supplying such claimed structure, and neither teaching nor suggesting it, Bratslavsky even in combination with Schulze and d'Hoedt, and Dorr (once again assuming such combination even possible) fails to provide a valid basis for rejection of claim 12. Accordingly, withdrawal of the rejection of claim 12 is respectfully requested and that claim 12 be passed to allowance.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over an article published by Schulze and d'Hoedt appearing in Dentomaxillofacial Radiology (2002) 31, 32-38.

The rejection of claim 13 is based on the argument that Schulze and d'Hoedt's article suggests correcting the projective distortion on its imaging surface, but acknowledges that the article fails to teach the steps of determining a corrective

transformation and applying the corrective transformation to the digitized image data. However, the unsupported assertion is made that it would be obvious to a person of ordinary skill in the art at the time the invention was made to do so. Applicants concur that the Schulze and d'Hoedt article does fails to provide for these steps while simultaneously and respectfully disagreeing with the assertion that determining a corrective transformation and applying it to the digitized image data is obvious to a person of ordinary skill in the art at the time the invention was made.

Schulze and d'Hoedt's article discloses a method for correcting distortions in the image generated from an intraorally placed radiation sensor used with a digital radiography imaging system. This method determines angular disparities in paralleling X-ray projection by quantitative analysis of the elliptical shape of two spherical references and by location of their shadows onto the imaging plane based on a measurement of the magnification of the spheres to determine the actual inclination of the spheres to a specified receptor axis. Prerequisites for this method are a true perpendicular orientation of the central X-ray to a fixed, known datum reference frame and the use of two reference spheres attached to the object of interest with their main axis aligned with the object.

Claim 13 has been amended to clarify the step of placing at least one radio-opaque fiduciary element intermediate the radiation source and the imaging surface of the sensor requires that the radio-opaque fiduciary element be permanently attached to the sensor housing in a permanently fixed spatial position to the sensor imaging surface. As amended, it is believed that the method of claim 13 is patently distinctive over the cited Schulze and d'Hoedt method for at least the reasons analyzed below.

Schulze and d'Hoedt's method requires a structure having its two reference spheres be "temporarily attached to an object with their main axis aligned with the object." Article page 33, left column, lines 6 *et seq.*, also reiterated at Article page 37, right column, lines 12 *et seq.*, and at ***idem*** lines 29 *et seq.* All of these citations show that Schulze and d'Hoedt's requires that any corrective transformation operation on a structure where the reference spheres are attached not in a fixed relation to the sensor's imaging plane, but to a plane created by the object of interest itself. This is in direct contradiction to Applicants' claimed step of holding the fiduciary elements permanently attached to the sensor housing in a permanently fixed spatial position to the sensor imaging surface and not attaching them to the variable orientations of the plane defined and created by object being imaged. As such, any corrective transformation employed in the Schulze and d'Hoedt method will not be effective for image data derived from the method operating on Applicants' claimed underlying structure. Basically, the positioning of the fiduciaries in Schulze and d'Hoedt's method and that of Applicants' method requires different, mutually exclusive corrective transformations be used in processing the received digital image data, as the image data reaching the digital sensor's imaging plane in each instance is distorted from a different perspective.

Specifically, Schulze and d'Hoedt's positioning of their reference spheres cannot be altered to the structure being claimed by Applicants, i.e., positioning them in a fixed spatial relation to the sensor imaging plane, without rendering their method inoperable. This is because Schulze and d'Hoedt use their reference spheres attached to the object of interest to determine the orientation of a plane formed by the object of interest with the imaging plane which is held perpendicular to the X-ray source. On the other hand,

Applicants claim a method that determines the orientation of the sensor's imaging plane with respect to the radiation source and not other objects that may be imaged on the imaging plane. The difference between the two methods is in what is being imaged, the orientation of the subject object with regard to the X-ray source (the imaging plane held perpendicular) (Schulze and d'Hoedt), or the reference fiduciaries with regard to the imaging plane which is allowed variable, unknown orientation with regard to the X-ray source (Applicants).

Visually, as shown in Schulze and d'Hoedt's figures, Schulze and d'Hoedt's imaging plane is always shown as being perpendicular to the X-ray source while the object of interest, having the attached reference spheres, defines a plane non-perpendicular to the X-ray source (compare Article Figs. 1, 2, 3 with Applicant FIGS. 1a through 3b where the imaging plane is shown as being non-perpendicular to the X-ray source.)

Fundamentally these two methods differ in both approach and structure. Schulze and d'Hoedt measure the variable spatial orientation of an object with regard to an imaging plane having a known (perpendicular) and fixed orientation to an X-ray source while Applicants claim a method to correct distortions caused by projection of X-rays onto an imaging plane having an unknown spatial orientation with regard to the source of the X-rays (by fixing their fiduciaries with regard to the imaging plane in a known spatial orientation). In Schulze and d'Hoedt it is the skewed orientation of the object being imaged that is unknown and to be determined (that is why the reference spheres must be attached to the object being imaged), the orientation of the imaging plane being known, while in Applicants' claimed method it is the skewed orientation of the imaging plane

with regard to the X-ray source that is being determined.

By clarifying the claims to show that Applicants' method requires providing fiduciaries that are permanently attached to the sensor housing in a permanently fixed spatial position to the sensor imaging surface to the sensor imaging plane, Applicants believe that the patentable distinction between the claims and the cited Schulze and d'Hoedt reference is clear and respectfully requests that the rejection of their claims be withdrawn and the claims passed to allowance.

Additionally, Schulze and d'Hoedt admit that they have not developed a satisfactory corrective transformation for its image data and that no such method exists at the time of the article.

Starting with the Summary on page 32, under Conclusions: "*Although so far not sufficiently accurate* ...[the method]..." and at page 32, right column, lines 7-10, "However, *no method exists* to calculate the actual angulation of the receptor plane relative to the object in one radio-graphic image." Also, on page 37, right column, lines 48-50, Schulze and d'Hoedt admit, "*We are currently working on* the mathematical algorithm for correction of linear distortion from such angulations." And following *idem* on lines 53-55, "However, with the applied set-up both accuracy as well as reproducibility *are clearly not sufficient* for clinical use." Also on page 38, right column lines 9-10, "*We are currently initiating a software development* for these purposes in our department." And *idem* at lines 14-19, "Refinements to the method may increase the accuracy to a clinically acceptable level *and further research is required. Currently, no other method exists* providing equal information on this geometrical parameter inducing distortion on radiographic images." (Emphasis added in *italics*) (Note also the continued

use of the potential case, "could", "possible" in their Discussion beginning on page 37, left column, lines 30 et seq. in describing their set-up and conclusions.) And finally, note that Schulze and d'Hoedt, along with Bruellmann and Roeder published a follow up article (nearly three years after the cited Schulze and d'Hoedt reference) titled, "Determination of projection geometry from quantitative assessment of the distortion of spherical references in single-view projection radiography" providing mathematical theory for a corrective transformation function for their set up. Therefore, it cannot be validly concluded that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have formulated just such a corrective transformation and apply it to the distorted image data even if Schulze and d'Hoedt's referenced method structure was equivalent to that of the Applicants, which it is not as shown above.

For at least these reasons, Applicants believe that claim 13 is patently distinct over the cited Schulze and d'Hoedt reference and respectfully requests withdrawal of the rejection of this claim and its passage to allowance.

Claim 15 is rejected based on Schulze and d'Hoedt's Article analyzed above and further in view of U.S. Patent No. 6,196,715 B1 to Nambu et al. ("Nambu").

Nambu discloses a method that provides a radio-opaque fiduciary element on the housing of a radiation detector.

As analyzed above, holding the fiduciary elements in a fixed relation to the sensor imaging plane cannot be done in the Schulze and d'Hoedt disclosure without rendering it inoperative. Therefore, any attempt to combine the Nambu reference with Schulze and d'Hoedt results in an inoperative structure. . .

Since claim 15 depends from claim 13, analyzed above to be patentable over the cited reference of Schulze and d'Hoedt, and claims further limiting structure in its claimed method steps, it is also believed to be patentable over the cited references. Withdrawal of the rejection of claim 15, and its allowance is respectfully requested.

In conclusion, Applicant has responded to pending Office Action dated September 12, 2006 by amending the claims making them more definite as to the subject matter being claimed, and by distinguishing the claimed invention as being patentable over the references cited by the Examiner in refusing allowance. With this response Applicant believes the application to now be in condition for allowance, and allowance of the application is respectfully requested. If the Examiner disagrees with Applicant, or feels that additional clarification is necessary, Applicant's attorney respectfully requests that the Examiner call Applicant's attorney (310-471-1519) to determine if the issue can be resolved prior to issuance of an additional office action in this matter.

Respectfully submitted,

Date: January 11, 2007

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CERTIFICATE OF MAILING (37 C.F.R. 1.8(a))

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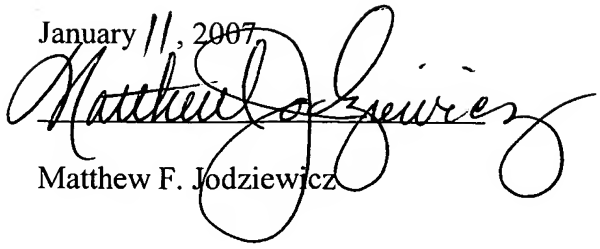
January 11, 2007



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